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OMB No. 0651-0011

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**INFORMATION  
DISCLOSURE  
STATEMENT**

Atty. Docket No.: 150,0064 0102

Serial No.: 09/942,200

Applicant(s): Eugene P. Marsh

Confirmation No.: 8194

Filing Date: 29 August 2001

Group: 2811

**U.S. PATENT DOCUMENTS**

Examiner Initial	Copy Enclosed	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
JN		3,839,164	10/01/74	Hurst			
		4,830,982	05/16/89	Dentai et al.			
		4,992,305	02/12/91	Erbil			
		5,045,899	09/03/91	Arimoto			
		5,096,737	03/17/92	Baum et al.			
		5,130,172	07/14/92	Hicks et al.			
		5,149,596 •	09/22/92	Smith et al.			
		5,187,638	02/16/93	Sandhu et al.			
		5,198,386	03/30/93	Gonzalez			
		5,232,873	08/03/93	Geva et al.			
		5,252,518	10/12/93	Sandhu et al.			
		5,270,241	12/14/93	Dennison et al.			
		5,341,016	08/23/94	Prall et al.			
		5,354,712	10/11/97	Ho et al.			
		5,362,632	11/08/94	Mathews			
		5,372,849	12/13/94	McCormick et al.			
		5,392,189	02/21/95	Fazan et al.			
		5,403,620	04/04/95	Kaesz et al.			
		5,464,786	11/07/95	Figura et al.			
		5,466,629	11/14/95	Mihara et al.			
		5,478,772	12/26/95	Fazan			
		5,480,684	01/02/96	Sandhu			
		5,487,923	01/30/96	Min et al.			
		5,498,562	03/12/96	Dennison et al.			

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JN		5,506,166	04/09/96	Sandhu et al.			
		5,510,651	04/23/96	Maniar et al.			
		5,520,992	05/28/96	Douglas et al.			
		5,555,486	09/10/96	Kington et al.			
		5,561,307	10/01/96	Mihara et al.			
		5,566,045	10/15/96	Summerfelt et al.			
	X	5,587,436	12/03/96	Summerfelt et al.			
		5,599,424	02/04/97	Matsumoto et al.			
		5,605,857	02/25/97	Jost et al.			
		5,618,746	04/08/97	Hwang			
		5,637,527	06/10/97	Baek			
		5,639,698	06/17/97	Yamazaki et al.			
		5,652,171	07/29/97	Nagano et al.			
		5,654,222	08/05/97	Sandhu et al.			
		5,654,224	08/05/97	Figura et al.			
		5,661,115	08/26/97	Sandhu			
		5,663,088	09/02/97	Sandhu et al.			
		5,679,225	10/21/97	Pastacaldi et al.			
		5,679,980	10/21/97	Summerfelt			
		5,691,009	11/25/97	Sandhu			
	X	5,691,219	11/25/97	Kawakubo et al.			
		5,695,815	12/09/97	Vaartstra			
		5,696,384	12/09/97	Ogi et al.			
		5,714,402	02/03/98	Choi			
		5,717,250	02/10/98	Schuele et al.			

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## FOREIGN PATENT DOCUMENTS

Examiner Initial	Copy Enclosed	Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
JN		DE 197 37 323 A1	03/11/99	Germany				
		0 301 725 A2	02/01/89	EPO				
		0 770 862	05/02/97	EPO				
		9 162372	06/20/97	Japan				
	X	WO 00/14778 •	03/16/00	PCT				

## OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

Examiner Initial	Copy Enclosed	Document Description
JN		Al-Shareef et al., "Analysis of the oxidation kinetics and barrier layer properties of ZrN and Pt/Ru thin films for DRAM applications", <i>Thin Solid Films</i> , 280, 265-270 (1996).
		Bhatt et al., "Novel high temperature multilayer electrode-barrier structure for high density ferroelectric memories," <i>Appl. Phys. Letter</i> , 71 (1997).
		Cohan et al., "Laser-assisted organometallic chemical vapor deposition of films of rhodium and iridium," <i>Appl. Phys. Lett.</i> , 60, 1402-1403 (1992).
		Doppelt et al., "Mineral precursor for chemical vapor deposition of Rh metallic films," <i>Mater. Sci. Eng.</i> , 817, 143-146 (1993).
		Etspuler et al., "Deposition of Thin Rhodium Films by Plasma-Enhanced Chemical Vapor Deposition," <i>Appl. Phys. A</i> , 48, 373-375 (1989).
		Green et al., "Chemical Vapor Deposition of Ruthenium and Ruthenium Dioxide Films," <i>J. Electrochem. Soc.</i> , 132, 2677-2685 (1985).
		Hoke et al., "Low-temperature Vapour Deposition of High-purity Iridium Coatings from Cyclooctadiene Complexes of Iridium," <i>J. Mater. Chem.</i> , 1, 551-554 (1991).
		Hsu et al., "Synthesis and X-ray structure of the heteronuclear cluster, $(\mu\text{-H})_2(\eta^5\text{-C}_5\text{H}_5)\text{IrOs}_3(\text{CO})_{10}$ ," <i>Journal of Organometallic Chemistry</i> , 426, 121-130 (1992).
		Johnson et al., "Chemistry," <i>Nature</i> , 901-902 (1967).

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JN		Kaesz et al., "Low-Temperature Organometallic Chemical Vapor Deposition of Transition Metals," <i>Mat. Res. Soc. Symp. Proc.</i> , 131, 395-400 (1989).
		Kawahara et al., "(Ba, Sr)TiO <sub>3</sub> Films Prepared by Liquid Source Chemical Vapor Deposition on Ru Electrodes," <i>Jpn. J. Appl. Phys.</i> , 35, 4880-4885 (1996).
		Khakani et al., "Pulsed laser deposition of highly conductive iridium oxide thin films," <i>Appl. Phys. Lett.</i> , 69, 2027-2029 (1991).
		Kumar et al., "New precursors for organometallic chemical vapor deposition of rhodium," <i>Can. J. Chem.</i> , 69, 108-110 (1991).
		Kwon et al., "Characterization of Pt Thin Films Deposited by Metallorganic Vapor Deposition for Ferroelectric Bottom Electrodes," <i>J. Electrochem. Soc.</i> , 144, 2848-2854 (1997).
		Liao et al., "Characterization of RuO <sub>2</sub> thin films deposited on Si by metal-organic chemical vapor deposition," <i>Thin Solid Films</i> , 287, 74-79 (1996).
		Lu et al., "Ultrahigh vacuum chemical vapor deposition of rhodium thin films on clean and TiO <sub>2</sub> -covered Si(111)," <i>Thin Solid Films</i> , 208, 172-176 (1992).
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		Niemer, B., et al., "Organometallic chemical vapor deposition of tungsten metal, and suppression of carbon incorporation by codeposition of platinum," <i>Appl. Phys. Lett.</i> , 61(15):1793-1795 (1992).
		Pathangey et al., "Various approaches have been explored to obtain atomic layer controlled growth, but one of the most straightforward growth techniques is molecular beam epitaxy (MBE)," <i>Vacuum Technology and Coating</i> , 33-41 (May 2000).

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JN		Rausch et al., "Isolation and Structural Characterization of Bis( $\eta^5$ -cyclopentadienyl)bis(carbonyl)- $\mu$ -(o-phenylene)-diiridium (Ir-Ir), (C <sub>5</sub> H <sub>5</sub> ) <sub>2</sub> Ir <sub>2</sub> (C <sub>6</sub> H <sub>4</sub> ): A Product Formally Derived from the Double Oxidative Addition of Benzene to Iridium," <i>J. Amer. Chem. Soc.</i> , 99, 7870-7876 (1977).
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		Suntola, "Atomic layer epitaxy," <i>Thin Solid Films</i> , 216, 84-89 (1992).
		Takasu, T., et al., "Preparation of a novel Pt-RuO <sub>2</sub> /Ti electrocatalyst by use of highly porous ruthenium oxide support prepared from RuO <sub>2</sub> -La <sub>2</sub> O <sub>3</sub> /electrode," <i>Journals of Alloys and Compounds</i> , 261, 172-175 (1997).
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		Van Hemert et al., "Vapor Deposition of Metals by Hydrogen Reduction of Metal Chelates," <i>J. Electrochem. Soc.</i> , 112, 1123-1126 (1965).
		Versteeg et al., "Metalorganic Chemical Vapor Deposition by Pulsed Liquid Injection Using An Ultrasonic Nozzle: Titanium Dioxide on Sapphire from Titanium (IV) Isopropoxide," <i>J. Am. Ceram. Soc.</i> , 78, 2763-2768 (1995).

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